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SYMPHYSEOTOMY *VERSUS* THE INDUCTION OF PREMATURE LABOR.

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UNTIL within comparatively recent times, when labor became seriously or insuperably obstructed, the efforts of the obstetrician were directed toward saving the mother. The rights of the child received scant attention, and its life was deliberately sacrificed in order to diminish its diameters whenever the pelvic canal was too contracted to permit the passage of the normal fœtus. This practice was condemned by theologians, more especially the Roman Catholics; but was justified on the ground of expediency, the position taken being that, if without the intervention of art both mother and child would die when left to the unaided forces of Nature, the physician was justified in destroying the child that the mother might live. With the revival of the Cæsarean section, under the influence of modern surgery, this ancient position has become very materially altered, and the present tendency is most decidedly to give serious regard to the rights of the child in unnatural labor. Three problems have grown out of this development of the question. 1. Is embryotomy upon the living child, when deliberately elected over the Cæsarean section and symphyseotomy, a justifiable operation? 2. Is it justifiable, in labor in moderately contracted pelves, when the obstruction is considerable and yet not insuperable, to make such violent efforts at delivery, either by forceps or version, as to threaten the serious injury

of either mother or child, instead of resorting to symphyseotomy when judicious and well-directed efforts at delivery have failed to accomplish it? 3. In women known to suffer from contraction of the pelves of moderate degree, is it better to induce premature labor sufficiently early to permit the delivery of a living child, or to allow the pregnancy to go on to full term and to effect delivery under symphyseotomy, if this proves to be necessary?

The first problem, as to the justifiability of embryotomy done upon the living child, I take it, has been settled in the negative. The question no longer is, Shall both mother and child be permitted to die? nor is it, Shall one be destroyed in order that the other may live? The problem now is, Shall the effort be made by the Cæsarean section or symphyseotomy to save both mother and child, thereby increasing the prospective mortality of the mothers from one to three per cent. as contrasted with embryotomy? Or, to put it in another way, Shall one hundred children be destroyed in order that the lives of from one to three mothers shall not be put in jeopardy? As this question has only a relative bearing upon the subject under discussion, we shall not consider it further at this time.

The second problem is one which is now only coming up for solution, and has been brought to the front partly because of the large number of children who perish as the result of difficult labors, either during birth or shortly thereafter, and partly because of the very considerable number of children who are injured for life from the same cause. These are the "spoiled babies," having sustained injuries to the head, such as depressions or fractures, or great distortions of the skull, or injuries to the tissue of the brain itself, resulting in hemorrhages and subsequently in localized palsies, epilepsy, or in greater or less impairment of mental vigor.

The comparative safety of symphyseotomy suggests that the accepted teachings of the present be critically revised with reference to the conduct of labor in cases in which the

obstruction is considerable and yet not insuperable. I am inclined to believe that in the near future these considerations will considerably alter the present rules of practice. In the interests of the child, version will be less frequently resorted to. And in cases of moderate contraction of the pelvis, in which the unaided efforts of the mother, assisted by the judicious employment of forceps, do not succeed in accomplishing delivery, instead of employing violent traction efforts (which so generally injure the child and which are liable to injure the mother) symphyseotomy will be done. These remarks are not made in a dogmatic spirit, but simply indicate the drift of my own opinion concerning this subject.

The third problem is the one which immediately concerns us to-day, and it is my purpose in this paper to present the advantages of symphyseotomy as contrasted with the induction of premature labor in the management of cases of labor in women having moderately contracted pelves. The class of cases more especially referred to is the flat pelvis with a conjugate diameter of three inches or more, and the generally contracted pelvis with a conjugate diameter of three and a quarter inches or more, and even flat pelves with as short a conjugate diameter as two and three-quarter inches. It is recognized, of course, that disproportion between the head of the child and the pelvis depends not only upon the diameters of the pelvis, but also upon those of the head, and that spontaneous labor, or labor assisted either by the forceps or version, is quite possible in this class of cases when the head of the child is small or more than usually compressible. Given a woman in the eighth month of pregnancy, having a pelvis of the class under consideration, what shall be done? Shall labor be induced sufficiently before full term to permit the spontaneous delivery of the child, or its delivery assisted by forceps or version; or shall the pregnancy be permitted to go on to term, and then, if necessary, symphyseotomy be performed? This question, of course, must be studied from the standpoint both of the mother and the child. From the

standpoint of the mother we have to consider the mortality and morbidity of the operation of inducing premature labor as contrasted with that of symphyseotomy. The general mortality of the induction of premature labor is given in the text-books as five per cent. The general mortality of symphyseotomy is stated to be about ten per cent. As a matter of fact, I believe that both these statements are decidedly erroneous. Five per cent. is undoubtedly too high a mortality for the induction of premature labor. I have reason to believe that in good hands, when the indication for its performance is contraction of the pelvis, its mortality does not exceed one per cent. The dangers to the mother under these circumstances are far less than they are, for example, when the indication is puerperal eclampsia or placenta prævia. On the other hand, it is quite as absurd to say that the inherent risks to the mother from symphyseotomy are so great as indicated by a ten per cent. mortality. It is the old story of the fallacy of miscellaneous statistics. For the sake of argument it may be admitted that the general mortality of symphyseotomy is ten per cent. This represents the results which have been obtained under the conditions which exist in the practice of the profession at large. It includes cases in which the indication was proper, the operation skilfully done at the right time and after a proper technique, by skilful men; and it also includes the "too late" cases, in which the patients have been maltreated by midwives or by careless or ignorant practitioners before the performance of symphyseotomy, which conditions have nothing to do with the inherent risks of the operation. In order to contrast the relative dangers to the mother of symphyseotomy and the induction of premature labor, it will be necessary to analyze the cases. It must be recalled that the induction of premature labor is an operation done at a selected time, upon women in good condition, almost invariably by an obstetrician of experience. For the comparison to be just, only such symphyseotomies should be selected in which similar conditions prevail. Under these con-

ditions I am satisfied that the maternal mortality will not exceed one per cent. under either operation.

In support of my judgment concerning the slight inherent risks connected with symphyseotomy, I have to submit the following recent statistics of the operation, kindly furnished me by Dr. Robert P. Harris.

Since March 8, 1893, there have been 31 symphyseotomies in the United States, with 2 women and 7 children lost. In the fatal cases one woman was in labor three days before operation, and died of sepsis on the eleventh day. The other was in labor thirty-six hours, had a temperature of 102° and a pulse of 140, her vagina being œdematous and badly torn by forceps before entrance to the hospital. She died of marked shock in twelve hours. Three children were dead before operation, 2 were delivered by version and died under extraction, and 2 died soon after extraction.

Prof. Paul Zweifel, of Leipzig, has operated 23 times without the loss of child or mother.

The Italian record is incomplete. Since January 1, 1886, there have been 55 operations, with 2 women and 8 children lost. One woman was in labor ninety-six hours and died of septicæmia. The other had a long labor, with shoulder presentation and prolapsed cord, and died of metro-peritonitis after twelve days.

These statistics strongly support my statements. The fatal cases were in bad condition when operated upon, after the failure of other methods of treatment, and there was no reason in any of the cases to believe that the death was in any way due to symphyseotomy. On the contrary, it was due to the conditions which were present before its performance. These statistics also include many other cases which were in bad condition at the time of operation, yet which nevertheless recovered.

I cannot refrain from calling attention to the large number of deaths among the children delivered by version after symphyseotomy, in this country. It is to be hoped that

this plan of delivery will be abandoned in favor of the forceps.

From the standpoint of the child the advantages all lie with symphyseotomy. It has been amply demonstrated that a large percentage (about sixty-six and two-thirds per cent., according to Winckel) of premature children die within a few months of birth. With the incubator the infant mortality in hospitals was eighteen per cent. in the Leipzig Maternity and thirty per cent. in the Paris Maternité. Winckel's statement is explained by the large mortality among premature infants during the first year of life. The contrast between the prospects of a premature child born four or six weeks before full term, and those of a child born under symphysiotomy at term, are altogether in favor of the latter, whose prospects are nearly as good as the average of infants. This fact, and the conviction that the dangers to the mother are about equal, have convinced me that symphyseotomy at term is to be preferred to the induction of premature labor.

A paper by Dr. Robert P. Harris, read before the American Gynecological Society in 1892, giving detailed reports of the results of symphyseotomy in Italy, convinced me of the slight risks inherent in the operation. At that time I had under my care Mrs. G., who was seven months pregnant with her fifth child. She had been delivered once of a small child (not weighed) by vigorous traction efforts made with the forceps, the child being born with its head so injured that it lived but a short time. The second labor resulted in the spontaneous delivery of a very small child (not weighed). The third labor was a Cæsarean section done by Dr. Howard A. Kelly, with delivery of a child weighing six and fifteen-sixteenth pounds. The fourth labor was induced five weeks before term, by Dr. Kelly and myself, and the baby, a girl, was delivered by me with great difficulty, after the application of the high forceps. She weighed five and one-thirty-second pounds.

Mrs. G.'s pelvic measurements are as follows: Anterior

superior spines, 24 centimetres; cristæ ilii, 26 centimetres; external conjugate, 16.5 centimetres; conjugata diagonalis, 8.5 centimetres; conjugata vera (estimated), 7 centimetres. My thorough knowledge of the capacity of her pelvis, and my lively recollection of the difficulties encountered in delivering the premature child by forceps, made me hesitate to again induce labor. I decided instead to permit the patient to go to full term and then to deliver by symphyseotomy. The patient was informed that her labor would be the first in which symphyseotomy had been done instead of inducing premature labor. My conclusion had the indorsement of Drs. Harris and Parish. Symphyseotomy was done on December 5, 1892, and was followed by the high application of the forceps, and the delivery of a boy weighing eight and one-eighth pounds. The details of this symphyseotomy and the reasons why it was advised have been reported in a communication to the College of Physicians.[1] The mother made a good recovery and again became pregnant. She was delivered a second time under symphyseotomy and the application of the forceps, on March 19, 1894, of a girl weighing six and six-sixteenth pounds, and recovered without other incident than a mammary abscess. She is thus the first woman in the United States upon whom a second symphyseotomy has been performed, as well as the first woman in the world upon whom symphyseotomy has been done in preference to the induction of premature labor.

In conclusion, I submit this paper as a contribution to modern obstetrics, in the hope that it may aid in quickening the interest of the profession in the rights of the unborn child. As the subject is comparatively new, it is probable that the general experience of the profession will modify our views in certain particulars; but, as progress is ever forward, such changes will almost surely be in the direction of adding to the life-saving value of the agencies already at our command.

[1] Medical News, vol. i., 1893.

DISCUSSION.

Dr. R. A. Murray, of New York.—I think that Dr. Noble ought to be congratulated on his paper, because it is so thorough, and at the same time puts the operation of symphyseotomy in a little different light in this country from what has been done before. It brings up the question of choice between the induction of premature labor and symphyseotomy as elective operations. Symphyseotomy has usually been done to help the obstetrician out of a bad predicament, to avoid Cæsarean section or craniotomy on a living child. The patient has generally been long in labor, and in such a condition that the result has not been what we have a right to expect from symphyseotomy performed under better circumstances. Again, the induction of premature labor ought to be almost absolutely successful, and has been so in large hospitals. But, in general practice, it has fallen far short of that ideal result in the case of the mother, while so far as the child is concerned a large number are born dead, and many of those born alive have a very uncertain hold on existence. This must necessarily be so, for we cannot always determine the degree of development of the child by the length of time the mother has been pregnant, and her reckoning on this point may be two or more weeks out of the way. A few days' difference in the age of the fœtus is extremely important in relation to the induction of premature labor.

I shall not discuss the methods of inducing premature labor or of performing symphyseotomy. As the author has said, premature labor is generally induced by men who are capable of doing major operations in obstetrics, so that if the latter procedure is chosen as an elective operation it should, under the circumstances, be attended by next to no danger whatever. The patient is left without any complications, and the only added risk in letting her go to term, and then resorting to symphyseotomy, is the possibility that she may be afflicted with convulsions or other conditions which now and then complicate ordinary labor, and which would not arise if the uterus had been emptied earlier. I believe, then, that we shall soon have the same results

for the mother from symphyseotomy which we have heretofore had from premature labor, while the chances of the child will be much better.

Dr. Charles Jewett, of Brooklyn.—I did not have the privilege of hearing the paper, but shall say for symphyseotomy that I do not believe that we have yet realized the possibilities of the operation. When it comes to be done by the simple method of Morisani, where that is practicable, is confined within its proper limits, and is done early, the percentage of deaths, I feel sure, will be far less than at present. Premature labor, on the other hand, to say nothing of the high fœtal death-rate, is not entirely free from maternal mortality.

Dr. George J. Engelmann, of St. Louis.—I take pleasure in stating that it is my belief that we can safely predict that symphyseotomy in these cases will prove even more satisfactory than is hoped by Dr. Noble in his able paper. Every operation must, in the beginning, undergo a variety of tests and trials, and in the American statistics quoted in the paper a number of unfavorable cases appear which in the future will, I can safely predict, not be treated by this method, and such results thus eliminated. For instance, after the death of the child I see no reason for symphyseotomy, the decaying tissues endanger the wound, and craniotomy is then in place. In general, the limit of the antero-posterior diameter of the pelvis should not be below 6.7 centimetres, some allowance being made, of course, for the size of the child's head; if this be very large the antero-posterior diameter should not be below eight or even nine centimetres. The operation should be performed when labor has just begun, before the membranes have ruptured, and never after the death of the child, or when labor has been in progress some days, or laceration of the parts or of the uterus has taken place, lacerated or bruised tissues being an active danger and rendering speedy union impossible. Notwithstanding the strong points made by Dr. Noble he has not yet presented the most favorable statistics, which are the last, those reported by Morisani at the recent meeting of the International Medical Congress; they have not yet reached us in published form. By prolonged experience Morisani has gradually limited symphyseotomy to a suitable class of cases until the

results have been decidedly better than even those named in the paper. Experience may also extend the field for the operation, and I shall merely suggest a class of cases not mentioned to-day—those in which Cæsarean section might perhaps have been resorted to—the narrowing of the pelvis by solid tumors, in which further experience may show symphyseotomy a desirable substitute. But for the present it would seem that too much has been attempted, and that the proper sphere of symphyseotomy is one which is limited within narrow bounds and should be closely defined.

Dr. Malcolm McLean, of New York.—Dr. Noble has treated this subject in a broad, fair-minded way, having given both operations due weight, and I thoroughly agree with him, except with regard to one point, and that is the rather drastic way in which he speaks of version, which he thinks should be cast aside in favor of forceps. He gives as his reason the necessarily large percentage of infantile deaths from version. But there should be no such record of deaths from version or delivery by the feet as now exists. It is not uncommon to hear men admit that they have lost one in five or six children extracted in this manner. Now, this is totally unnecessary, and if delivery be properly performed such statistics will not exist.

Dr. Noble.—I have been very much pleased with the spirit with which my paper has been accepted. I had had some fears that my views were in advance of the period, and that some gentlemen might question the ground on which I stood.

With reference to version, I feel myself that it is the cause of a multitude of fœtal deaths every year, and my own judgment is that in the future version will be very much less frequently resorted to in the interest of the child. It is not a question of the results in Dr. McLean's hands, but in the hands of the profession at large.